

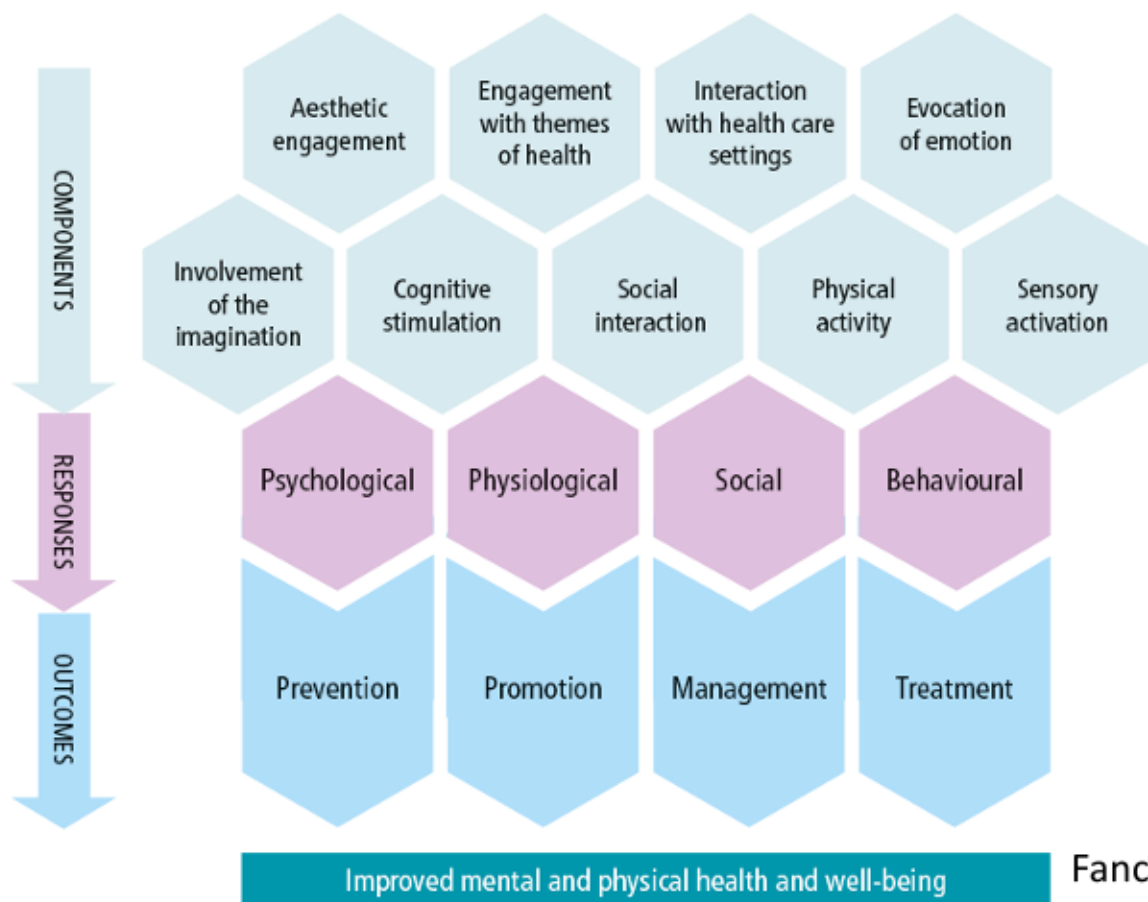
the **social**  
**biobehavioural**  
research group

# The Health Benefits of Taking Part in the Arts

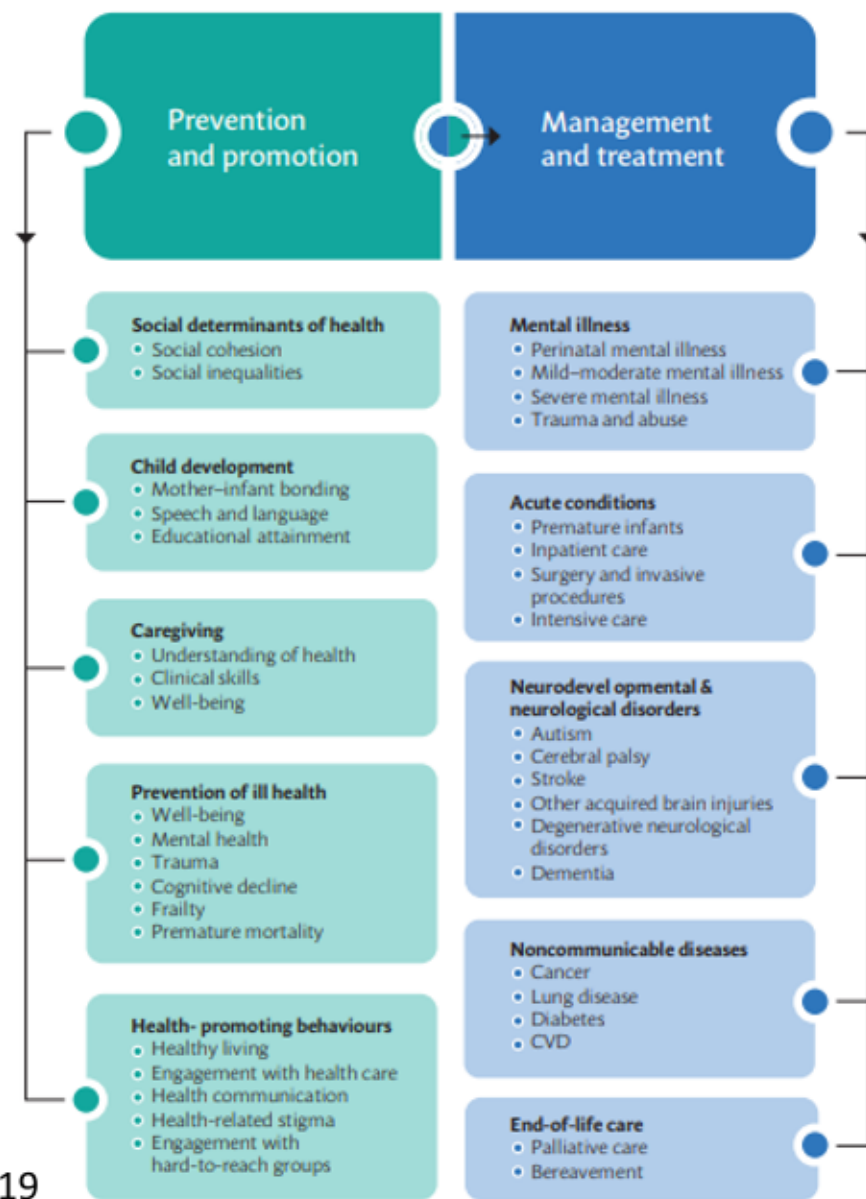
Dr Hei Wan (Karen) Mak  
Senior Research Fellow in Epidemiology/Statistics

What is the evidence on the role of the arts in improving health and well-being?

A scoping review



Fancourt & Finn WHO 2019



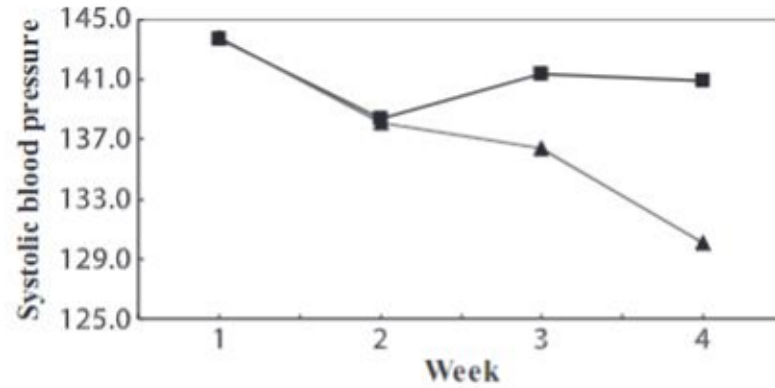
# What is arts?



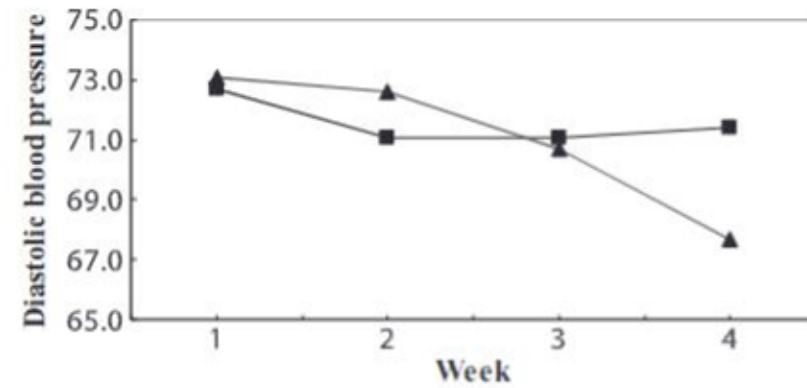
# Mental health & wellbeing

# Stress

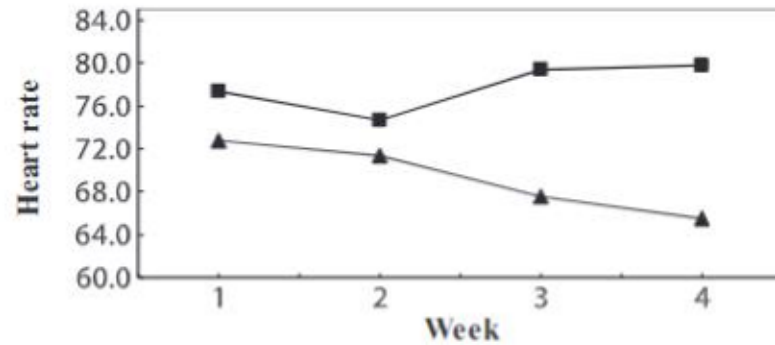
## Systolic blood pressure



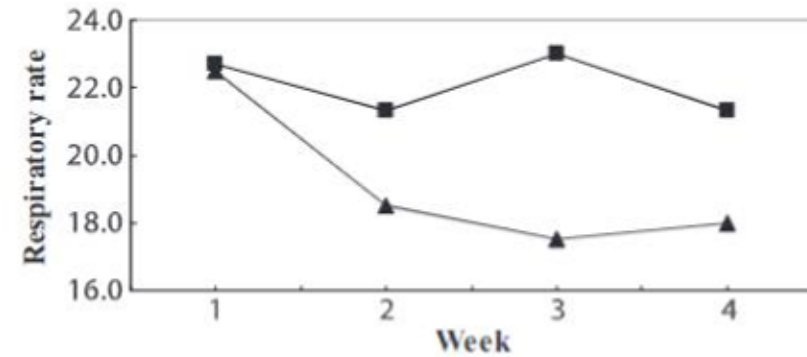
## Diastolic blood pressure



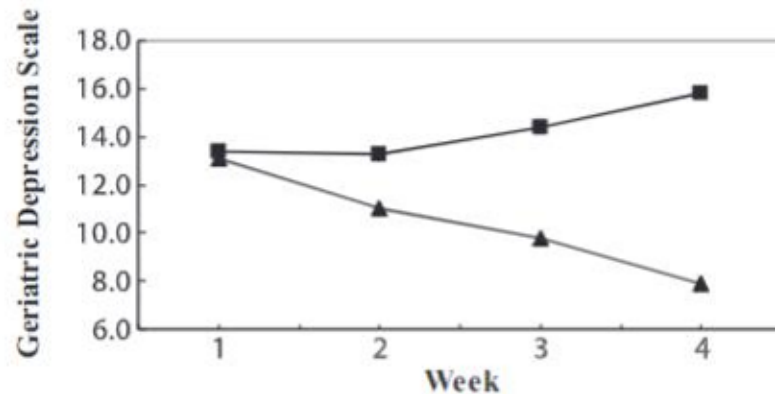
## Heart rate



## Respiratory rate



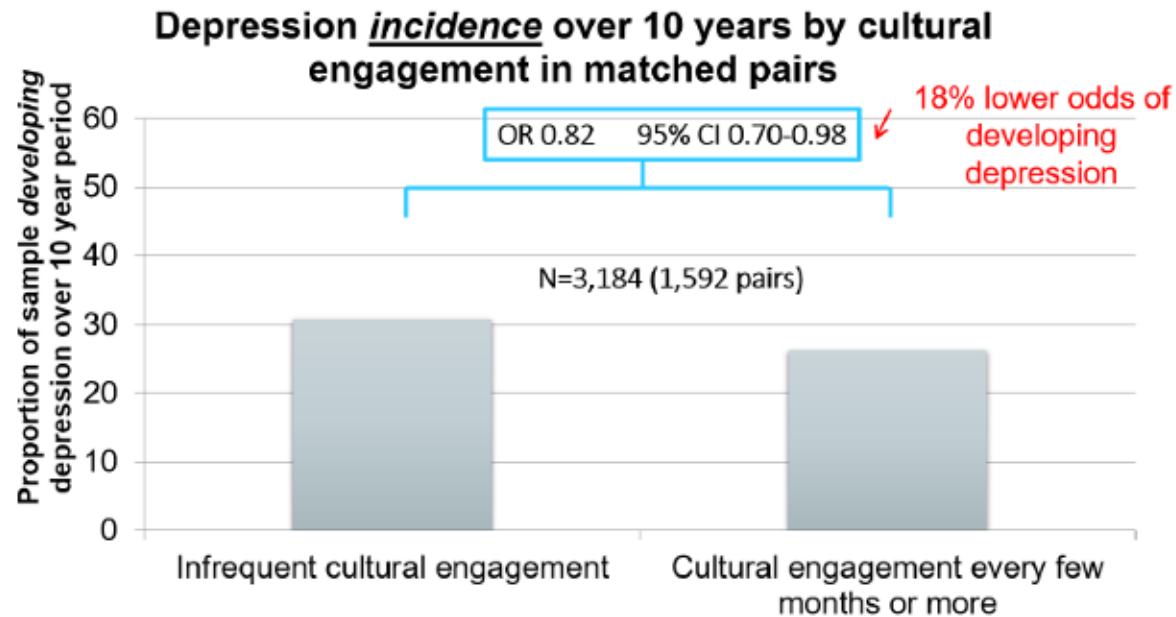
## Depression level



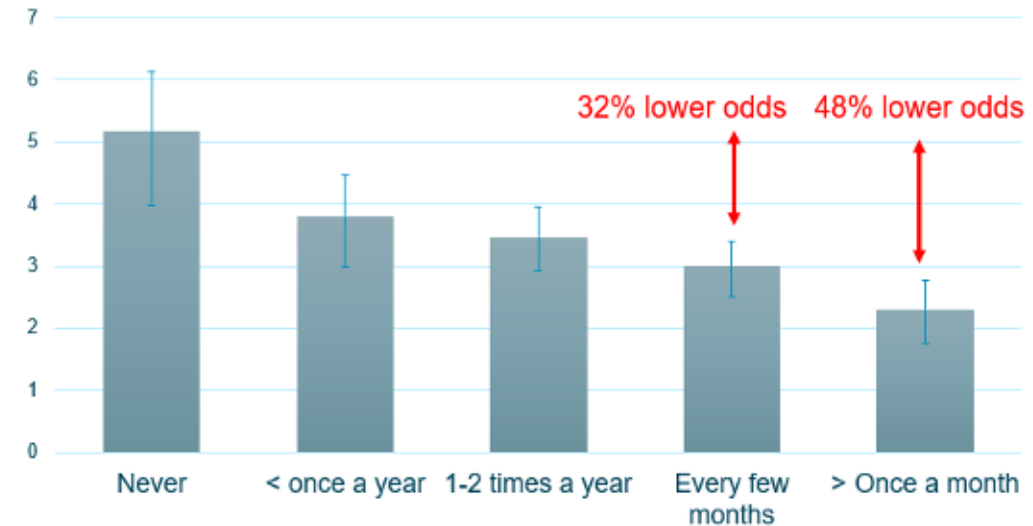
- Control group
- ▲ Music listening intervention group

## Depression

- Going to museums, theatre and cinema reduces the risk of developing depression in older age
- The greater the frequency, the lower the risk



## Depression incidence rates per 100 person-years

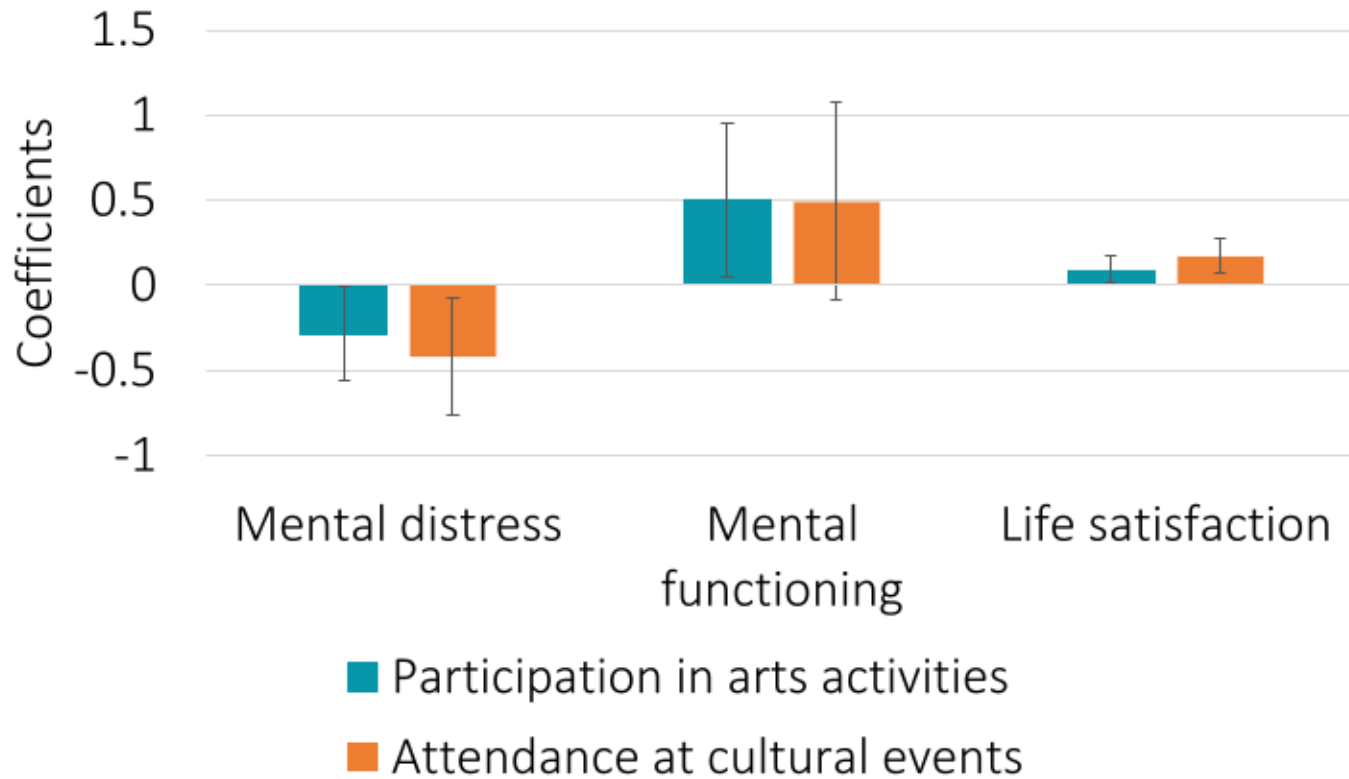


- Using three different statistical approaches, cultural engagement is linked with lower odds of depression in adults aged 50+
- SES may explain half of the association

Fancourt et al. Soc Sci Med 2019

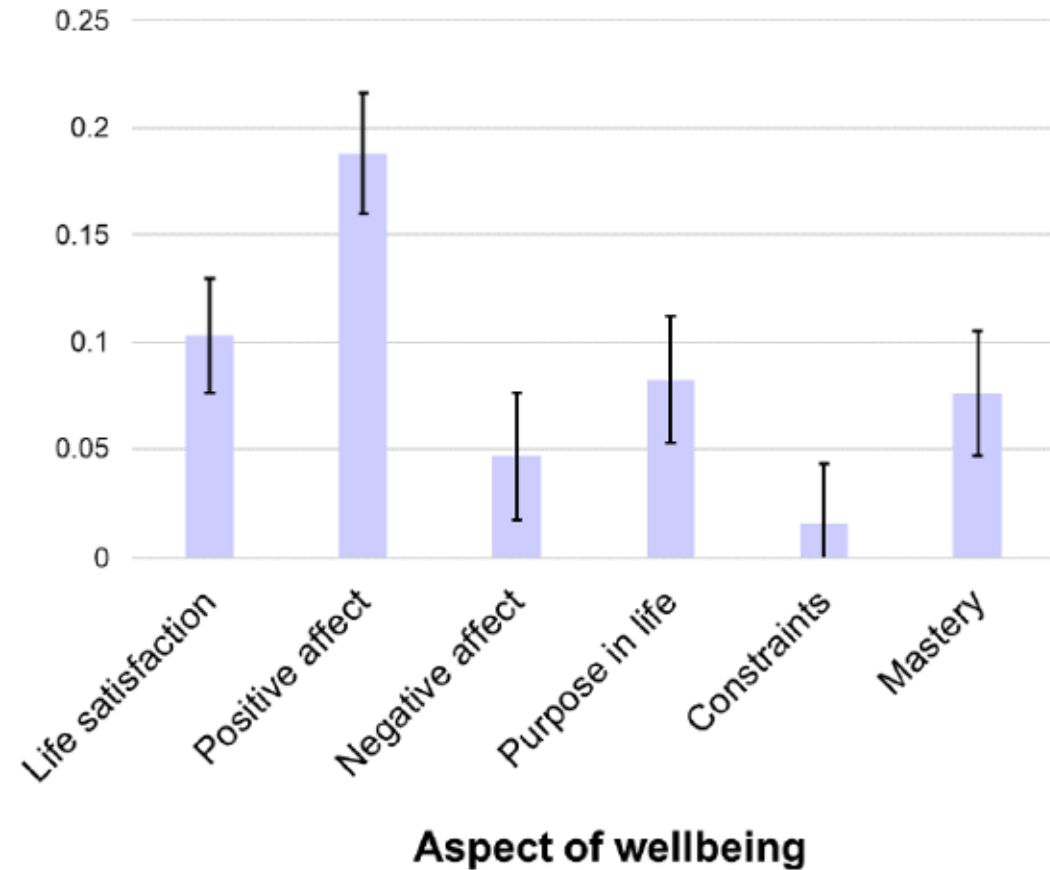
# Mental wellbeing

## Arts engagement and mental wellbeing over 3 years



Wang et al. BMC Public Health 2020

## Community arts group membership and wellbeing



Bone et al. Aging & MH 2022

## Factors of living a worthwhile life over 4 –year period

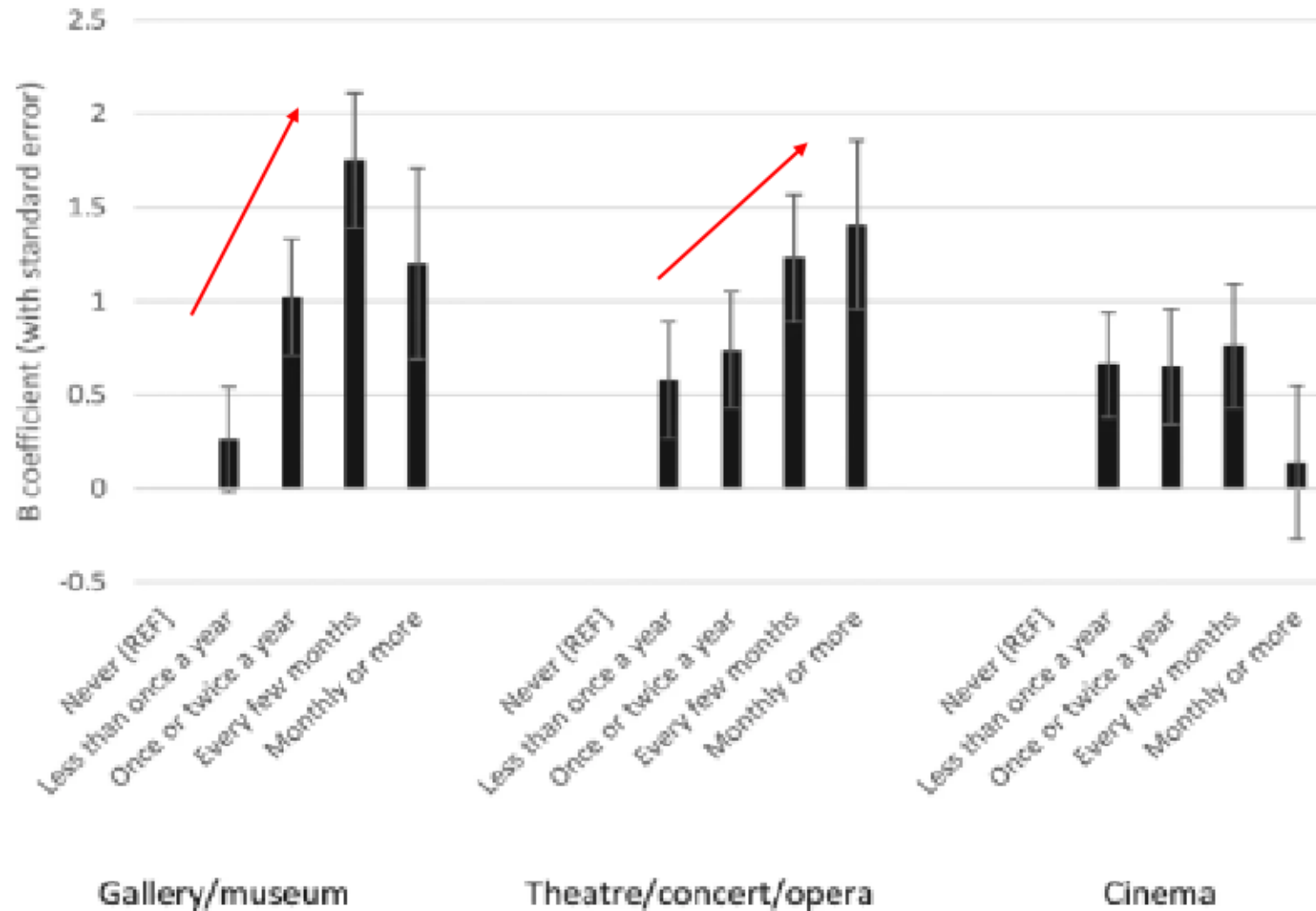
Factor	OR	$\beta$	95% CI	SE	<i>P</i>	<i>E</i> (CI)
<b>Social variables</b>						
Divorce <sup>a</sup> (%)	0.84		0.75–0.94		<0.001	1.5 (1.39)
Living alone <sup>b</sup> (%)	0.92		0.87–0.97		0.002	1.39 (1.21)
Close relationships <sup>c</sup> (n)		0.082		0.012	<0.001	1.59 (1.46)
Contact with friends $\geq$ 1/wk <sup>d</sup> (%)	1.06		1.01–1.11		0.017	1.2 (1.08)
Organizations <sup>e</sup> (n)		0.033		0.010	0.002	1.31 (1.16)
Volunteer $\geq$ monthly <sup>f</sup> (%)	1.10		1.04–1.16		<0.001	1.43 (1.24)
Loneliness rating <sup>g</sup>		-0.097		0.012	<0.001	1.67 (1.53)
Cultural activity $\geq$ every few months <sup>h</sup> (%)	1.07		1.02–1.12		0.007	1.34 (1.16)

Steptoe et al. PNAS 2019



# Cognition & Dementia

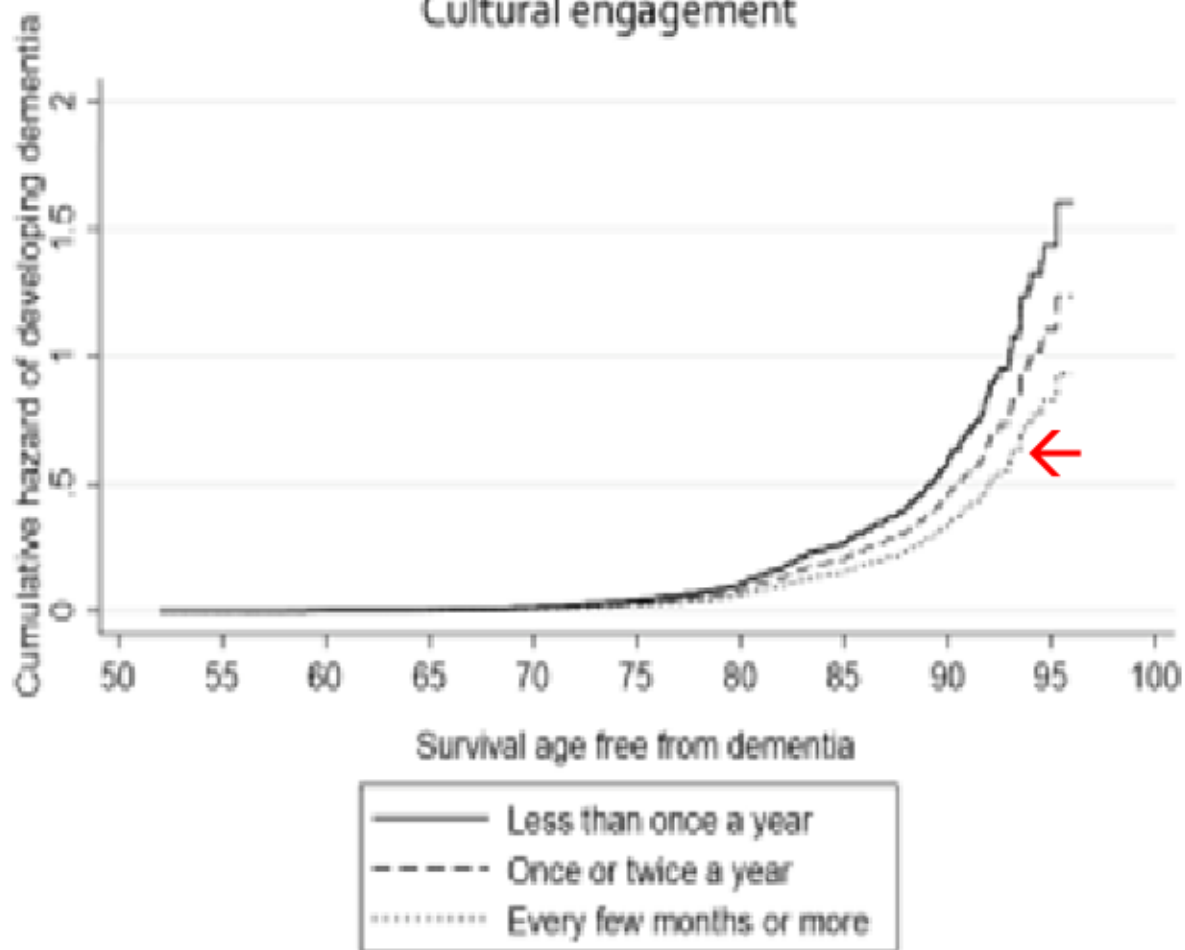
Cultural engagement and semantic fluency over a 10-year period



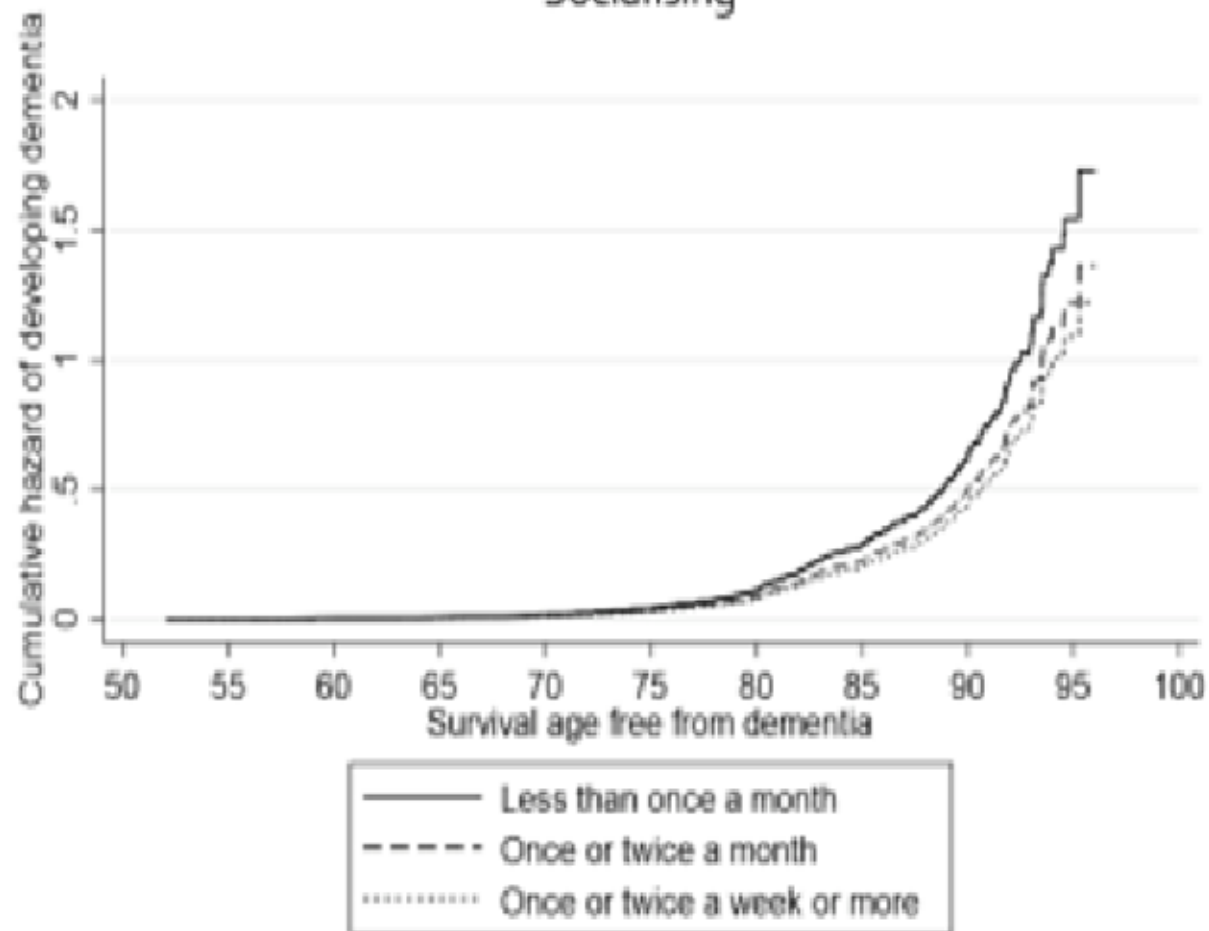
Fancourt et al. Sci Rep 2018

# Dementia

## Cultural engagement



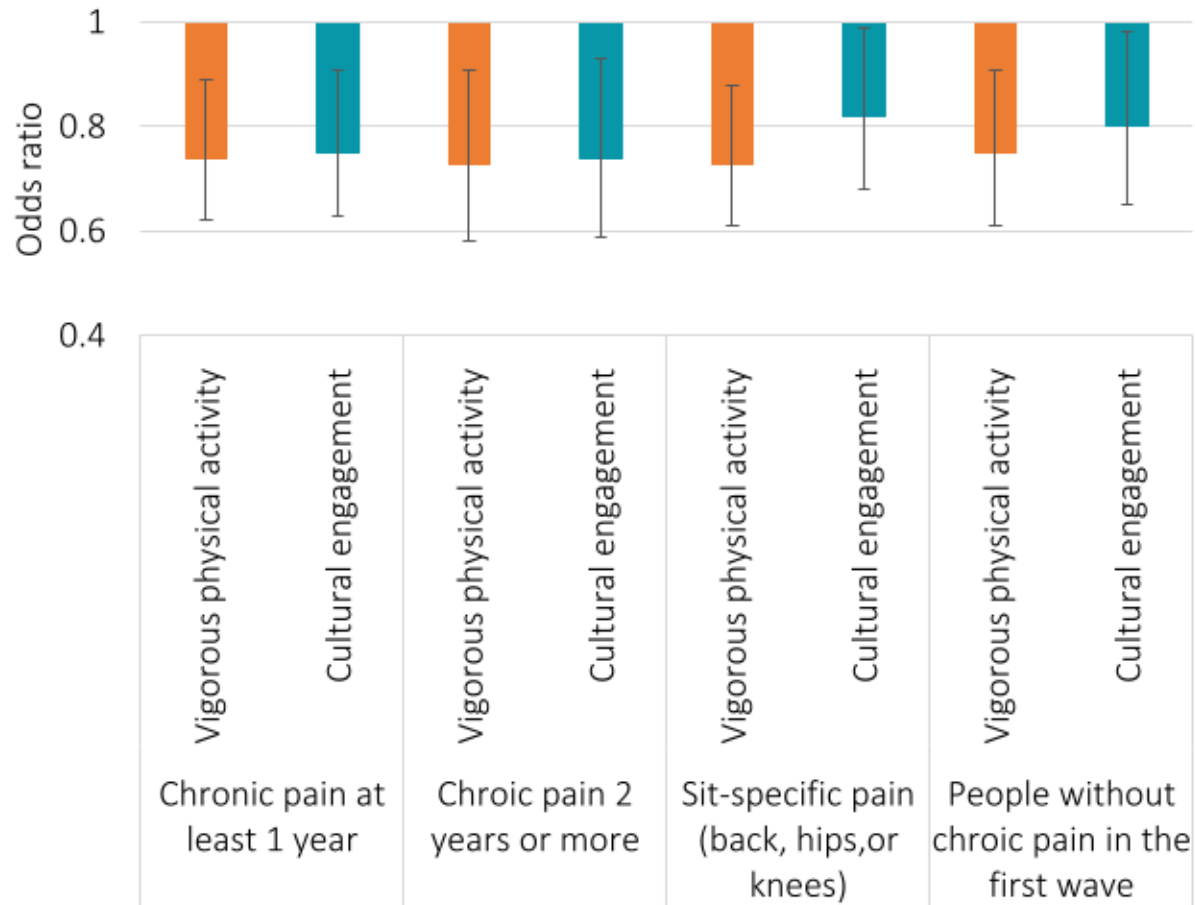
## Socialising



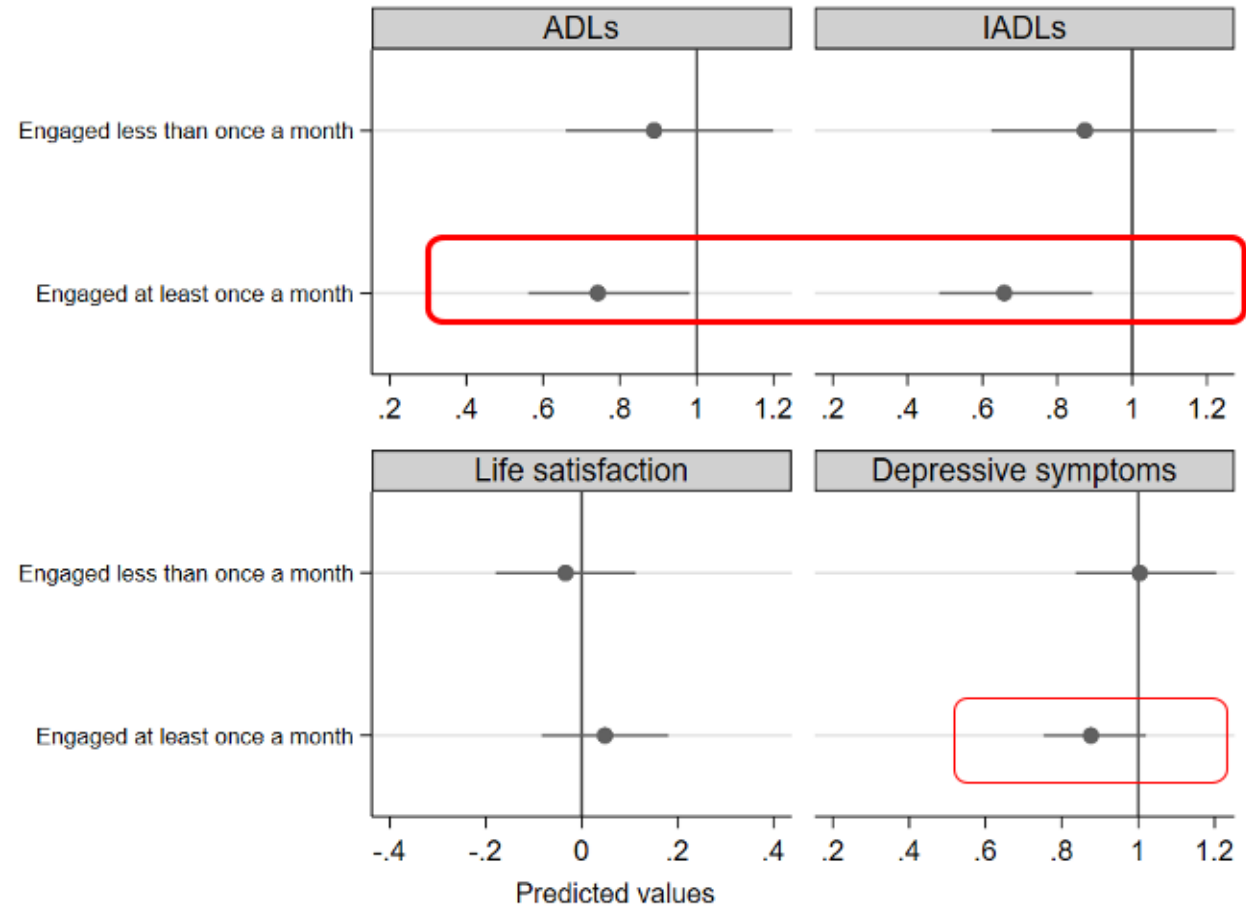
# Physical health

# Chronic pain

## Preventing chronic pain



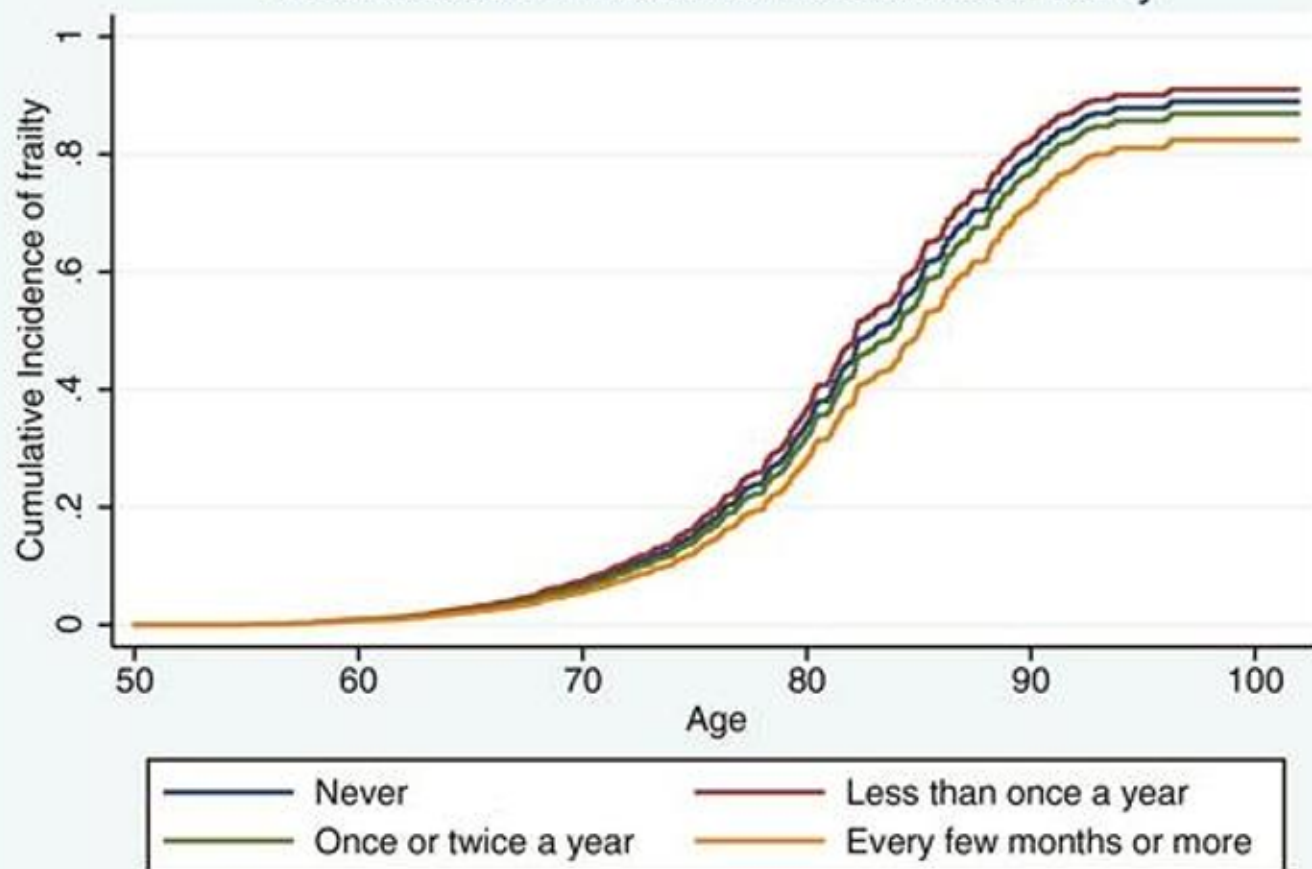
## Managing chronic pain



Borra et al. under review 2023

# Frailty

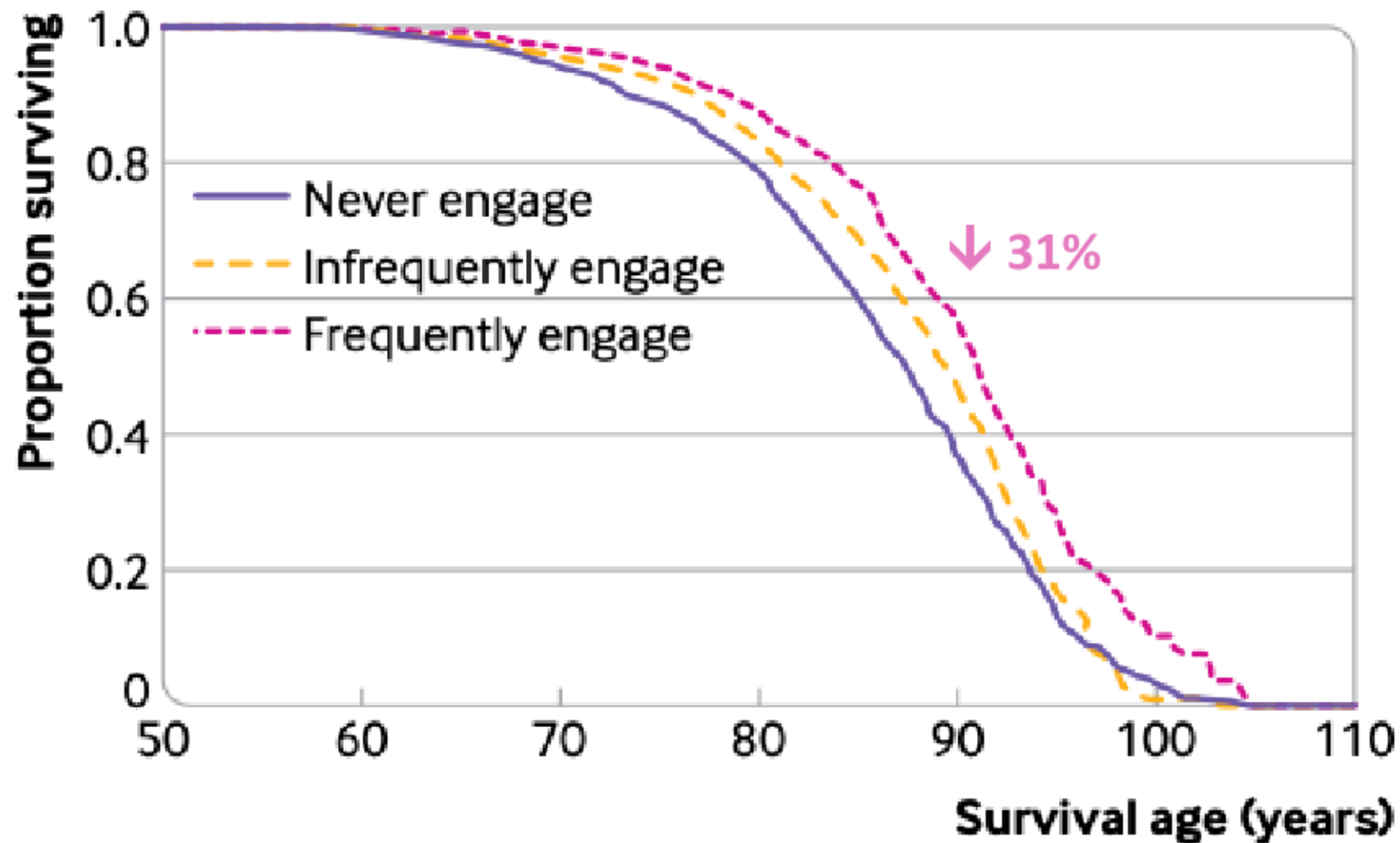
Modelled cumulative incidence of frailty



← 83% engaged in cultural activities  
← only 41% engaged every few months or more

Rogers et al. J Gerontol: Series B. 2020

# Mortality



- ← Cognition
- ← Mental health
- ← Physical activity

Fancourt et al. BMJ 2019

# Active ingredients & mechanisms



## Formula

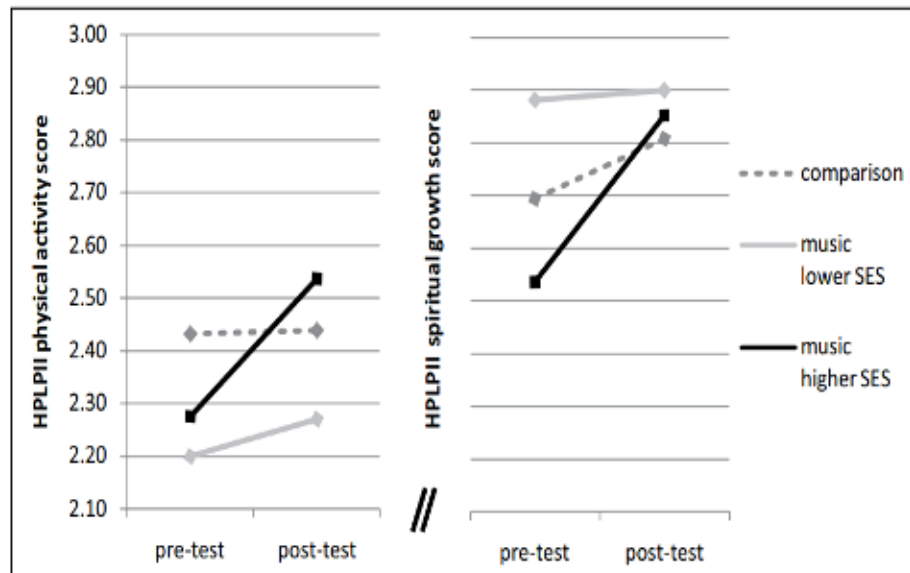
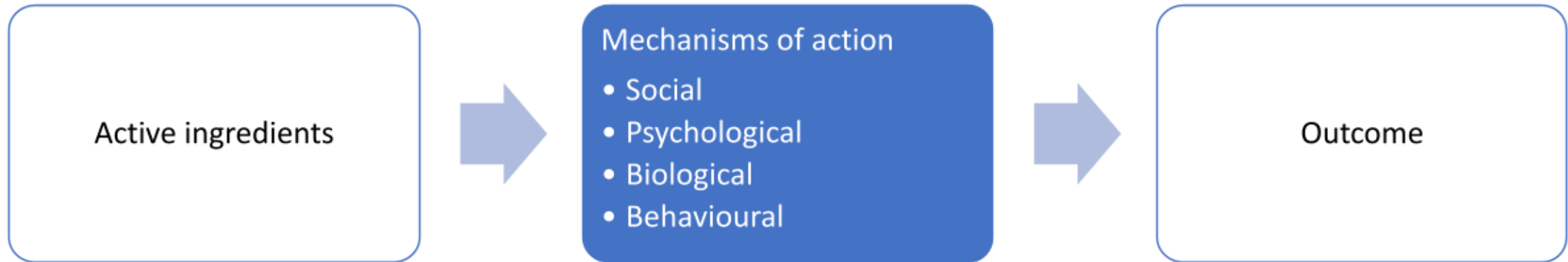


## Paracetamol



# Mechanisms in music

Fancourt et al. Lancet Psychia 2020



← Increased frequency of physical activity (**behavioural** mechanism)  
← Spiritual growth (**psychological** mechanism)

Perkins et al. Psy of Music 2014

# Active ingredients in music

## Active ingredients

- Sound of music
- Physical involvement
- Social engagement
- Personal response



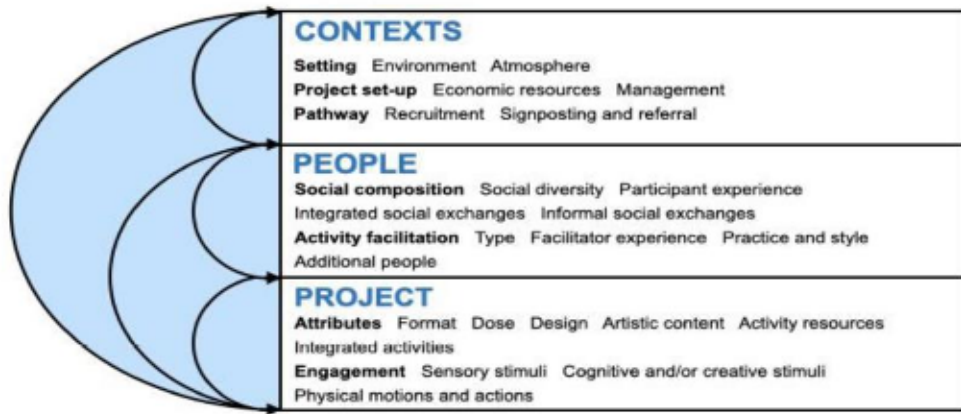
Mechanisms of action



Outcome

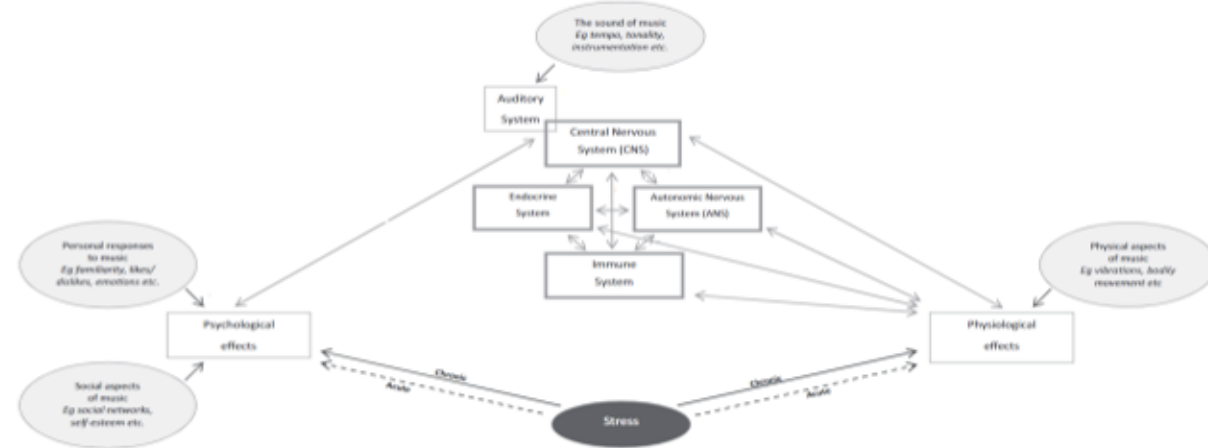
Fancourt et al. BBI 2013

## Active ingredients



Warran et al. 2022

## Psychoneuroimmunological model of music



Fancourt et al. BBI 2013

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# Inequalities in Arts Engagement

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Senior Research Fellow in Epidemiology/Statistics

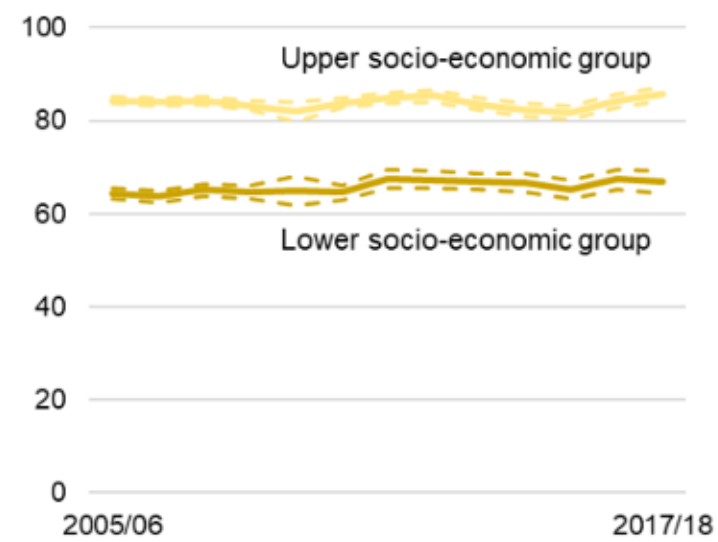
# Individual barriers

# Socio-economic position

	Engaged omnivore	Visual & literary arts	Performing arts	Cultural attendance
<b>Educational levels</b>				
Advanced (higher degree/A-level)	↓	↓	↓	↓
GCSE or equivalent	↓	↓	↓	↓
Other/no qualification	↓	↓	↓	↓
<b>Socio-economic status (SES)</b>				
Intermediate employment				↓
Lower supervisory / (semi-)routine	↓			↓
Not employed		↑		↓
<b>Household income</b>				
Parents' SES at aged 14	↓			↑
Intermediate employment	↓	↓		↓
Lower supervisory / (semi-)routine	↓	↓	↓	↓
None of the parents work				↓

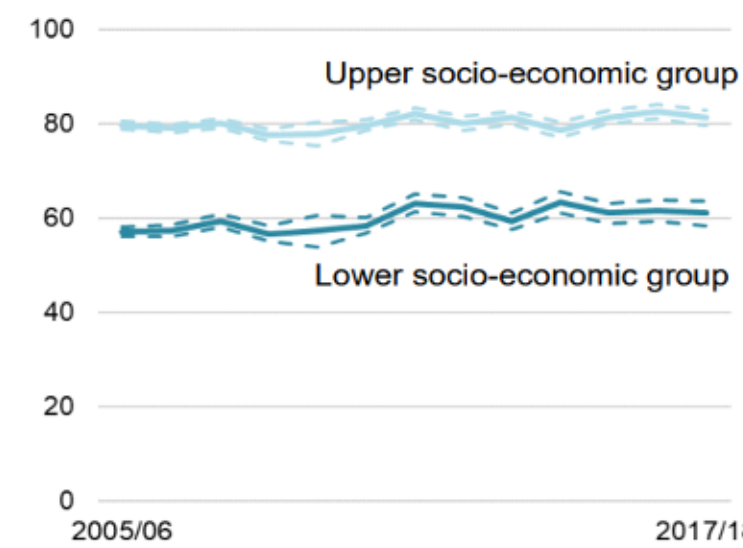
Mak, Coulter & Fancourt. *WHO Panorama*, 2021.

## Arts engagement



DCMS 2018

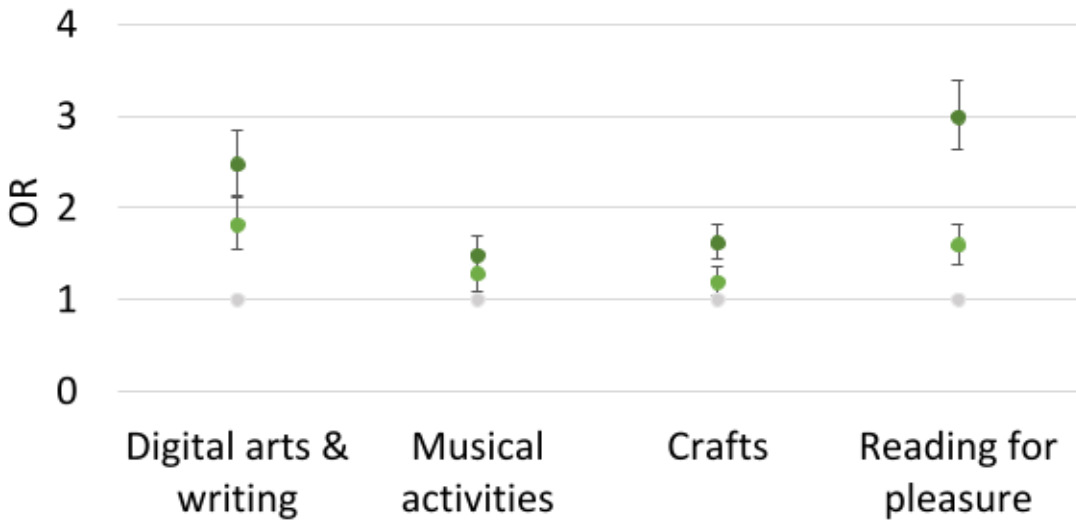
## Heritage



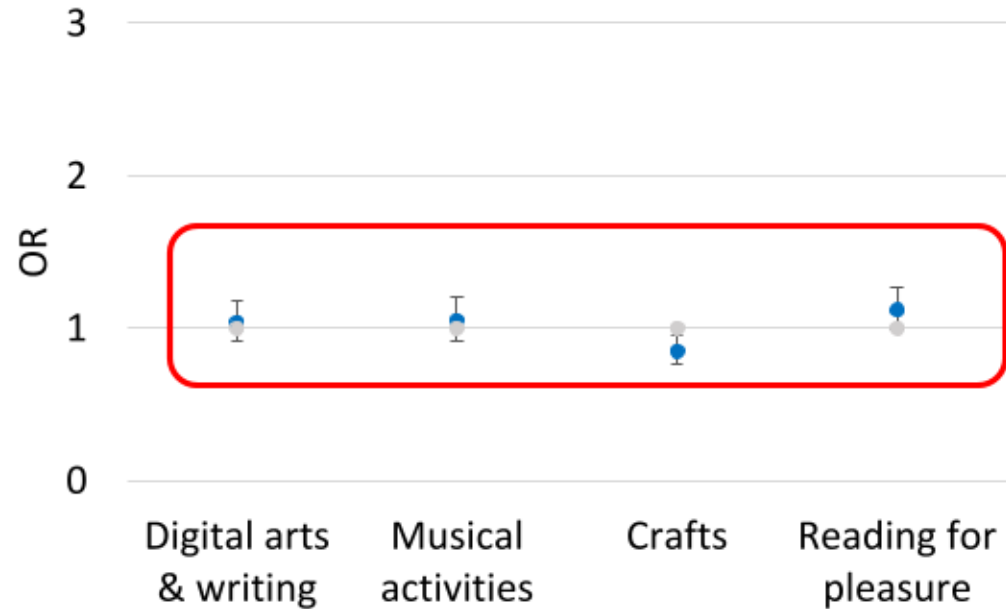
DCMS 2018

# COVID-19 effect

## Education level



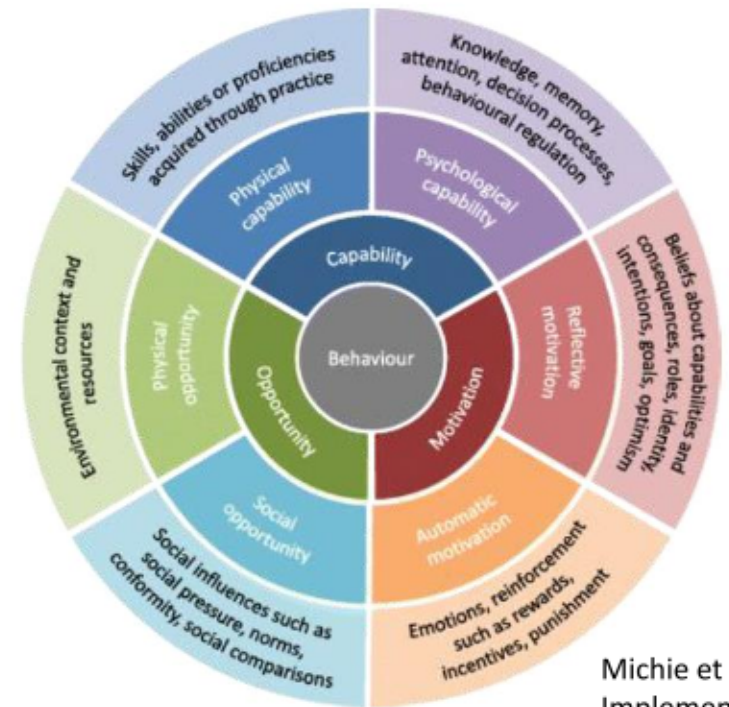
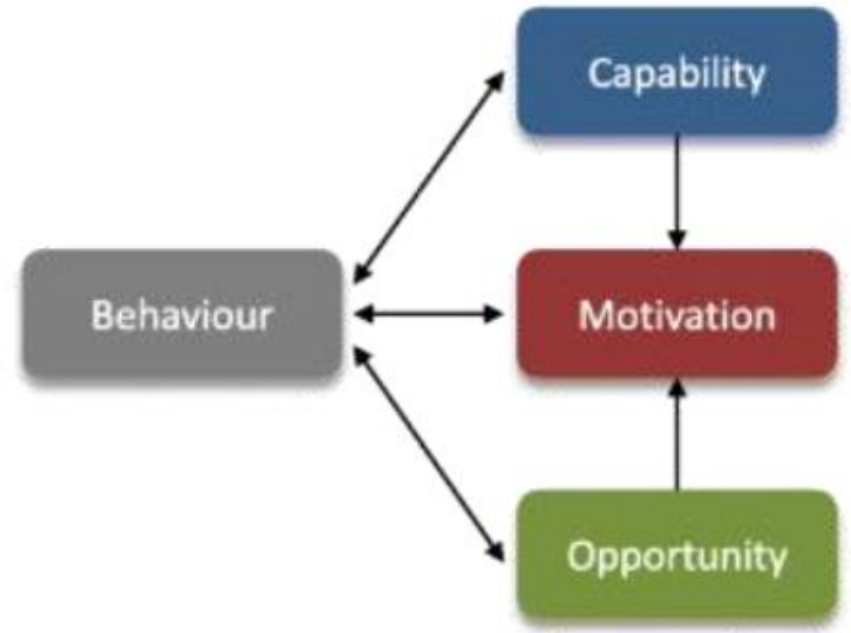
## Household income



● Up to GCSE  
● Post-16 education  
● Degree or above

● Household income  $\geq$ £30k  
● Household income  $<$ £30k

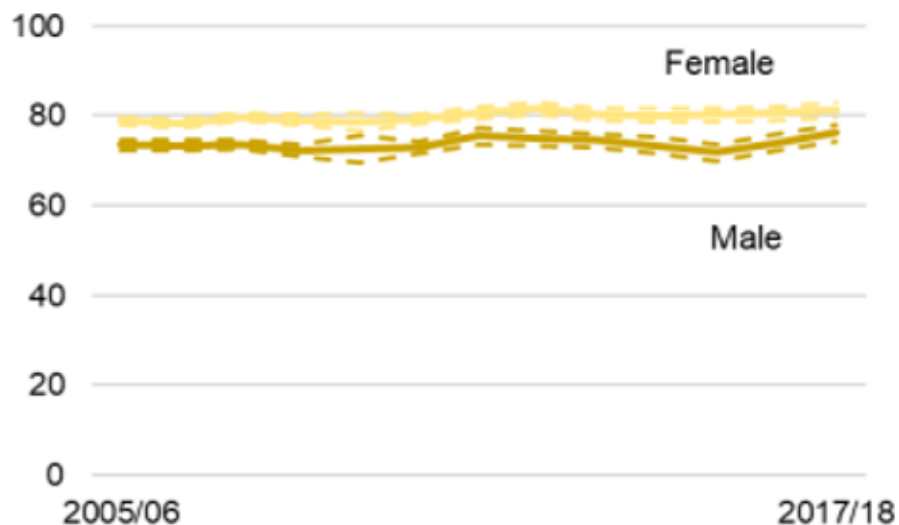
Mak et al. 2021. Frontiers in Psychology



Michie et al. 2011. Implementation Science

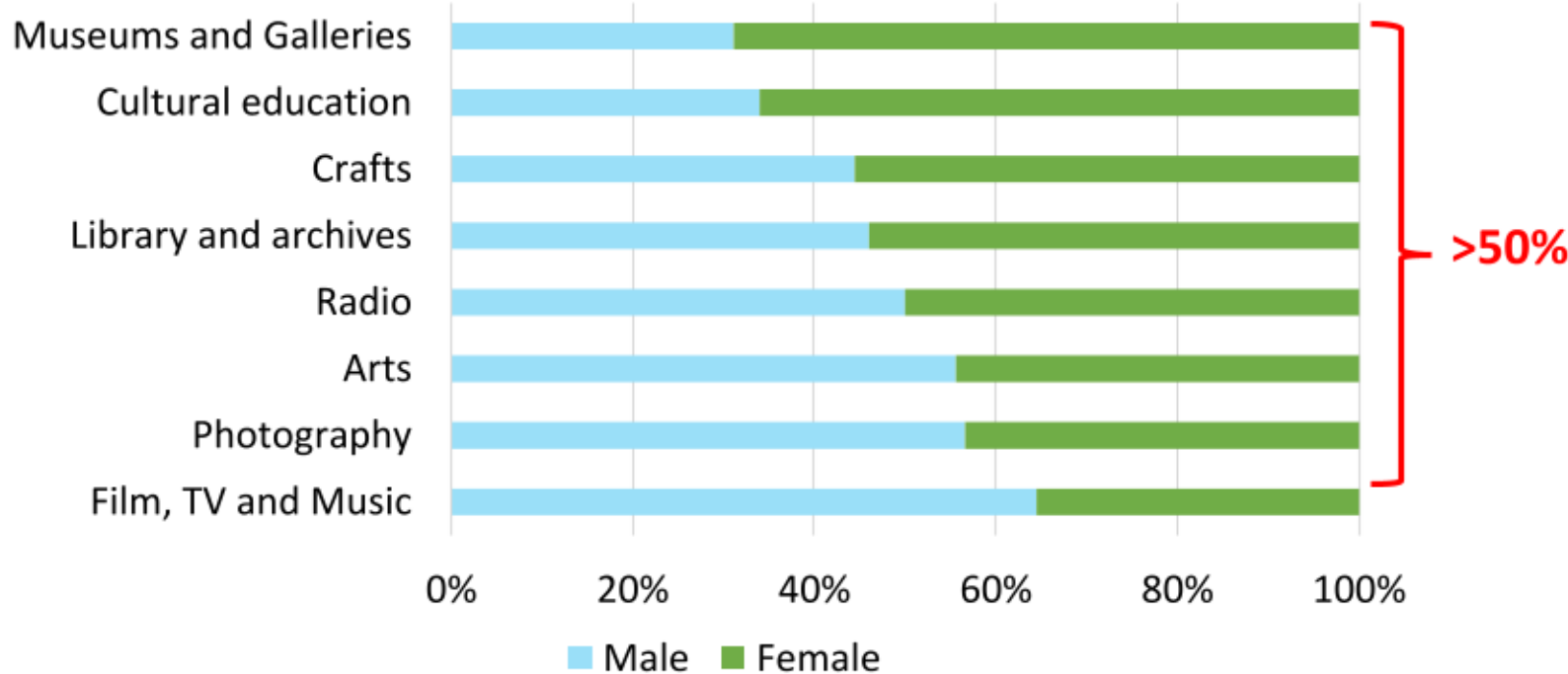
# Gender

## Arts engagement



DCMS 2018

## Cultural industries workforce



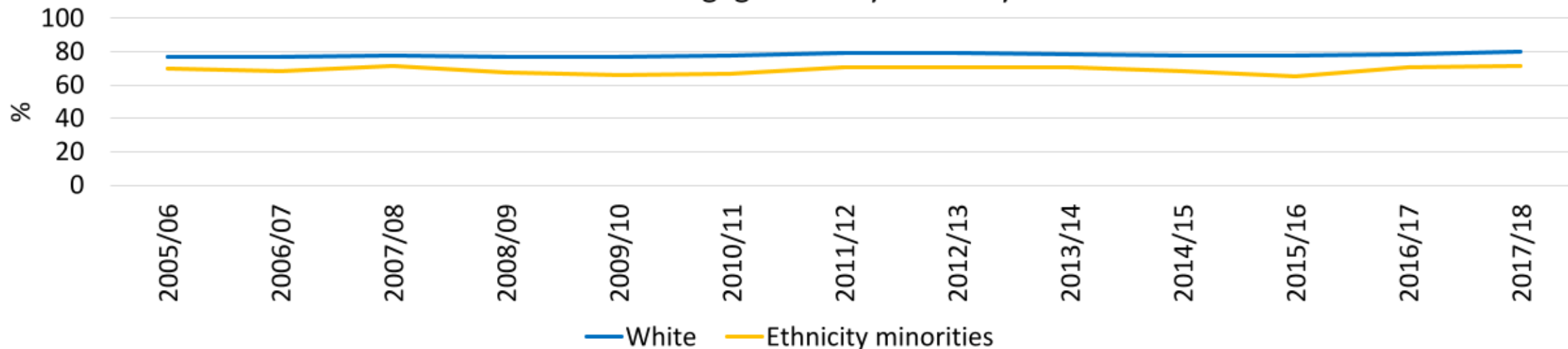
UK Department for Digital, Culture, Media & Sport (2019)



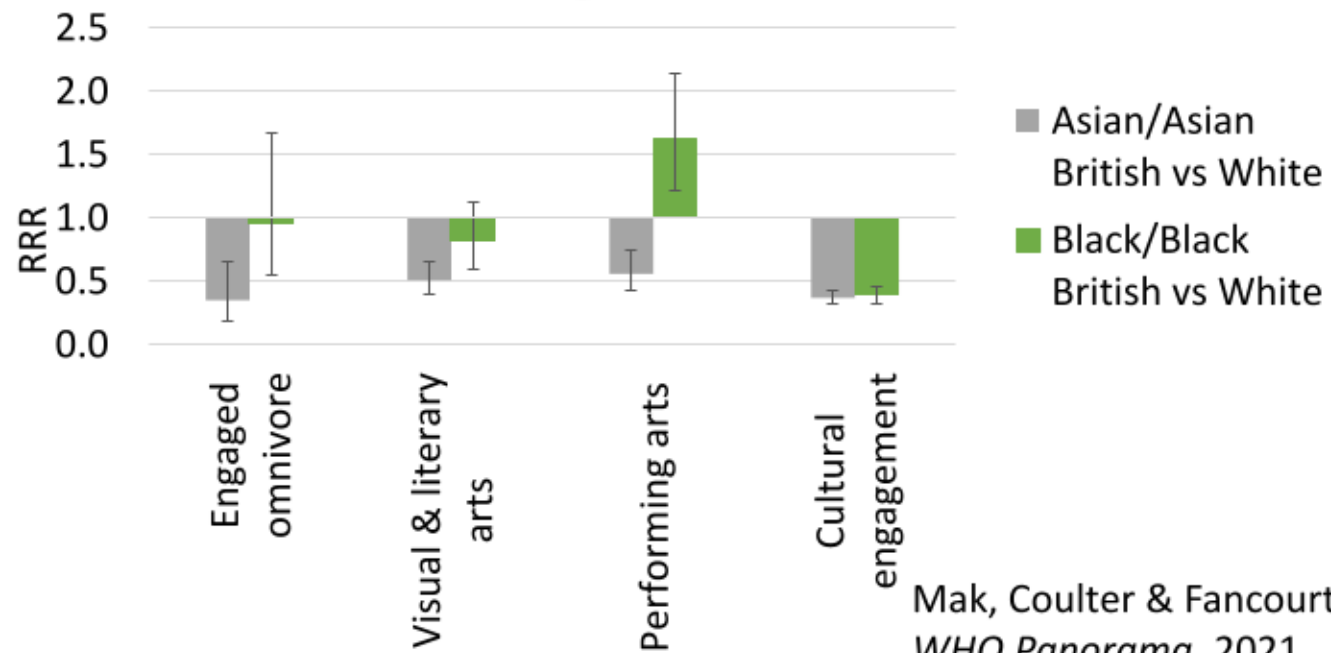
# Ethnicity

## Arts engagement by ethnicity

DCMS 2019/20

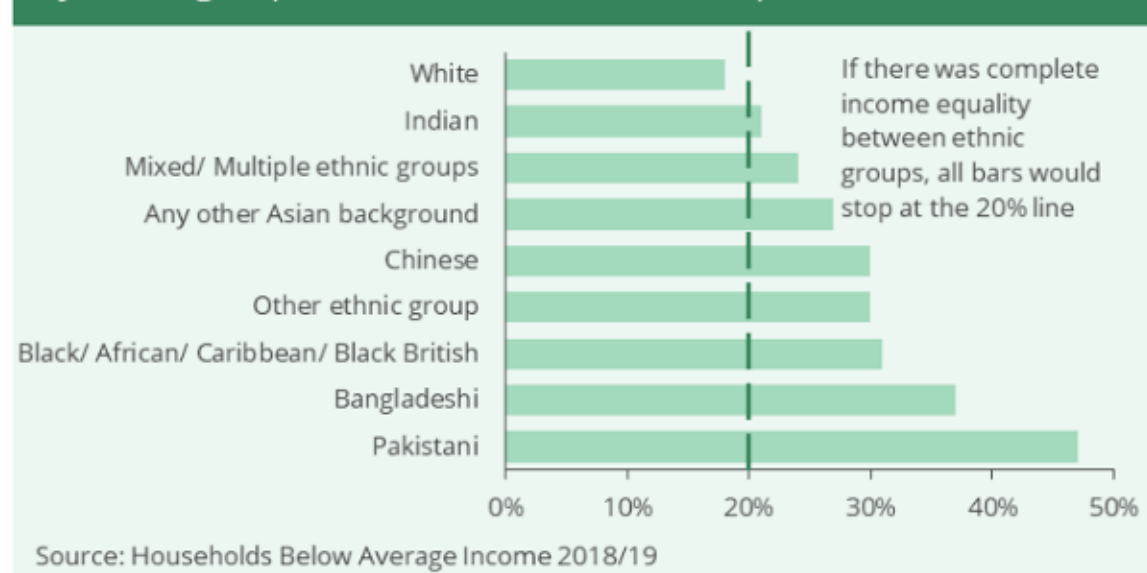


### England



Mak, Coulter & Fancourt. *WHO Panorama*, 2021.

### Percentage of individuals in the bottom fifth of incomes By ethnic group of the household reference person, 2016/17-18/19



Source: Households Below Average Income 2018/19

## Cultural engagement

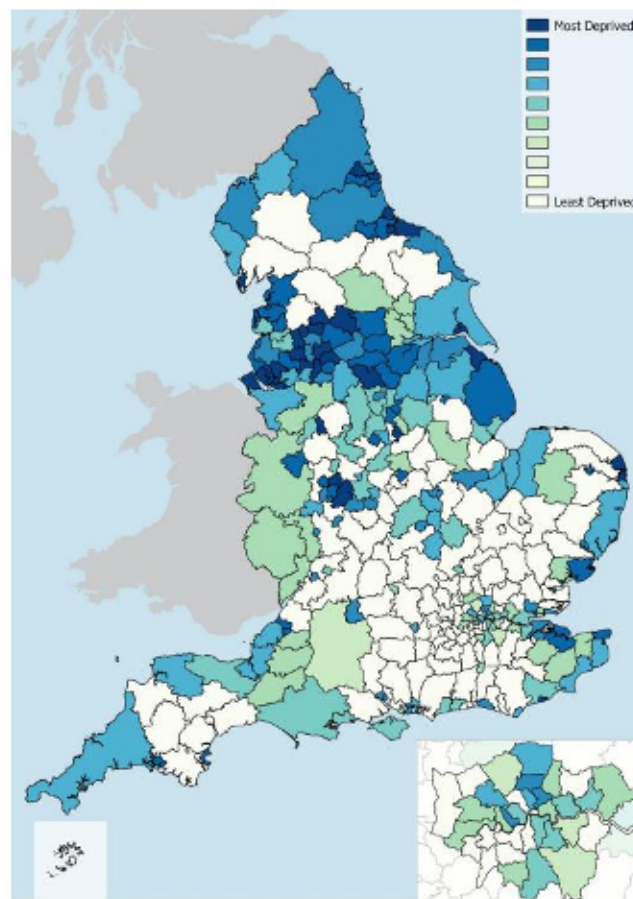
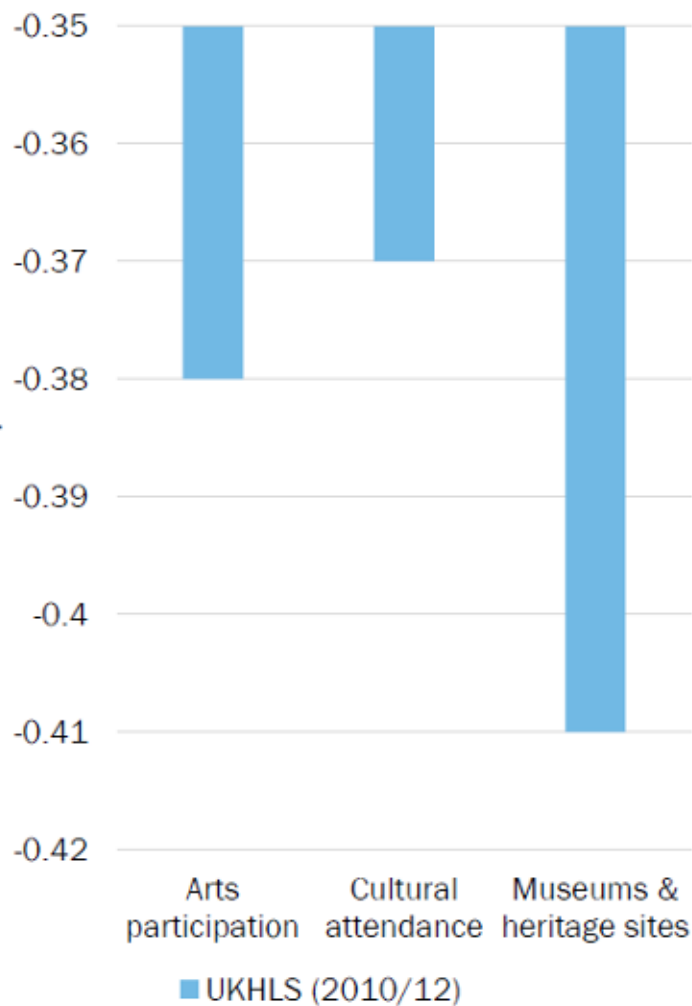
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<b>(vs industrious communities)</b>	<b>Unadjusted</b>	<b>+ demographic factors</b>	<b>+ Socio-economic factors</b>
Ethnically diverse professionals	↑	↑	
Multicultural living	↓	↓	↓

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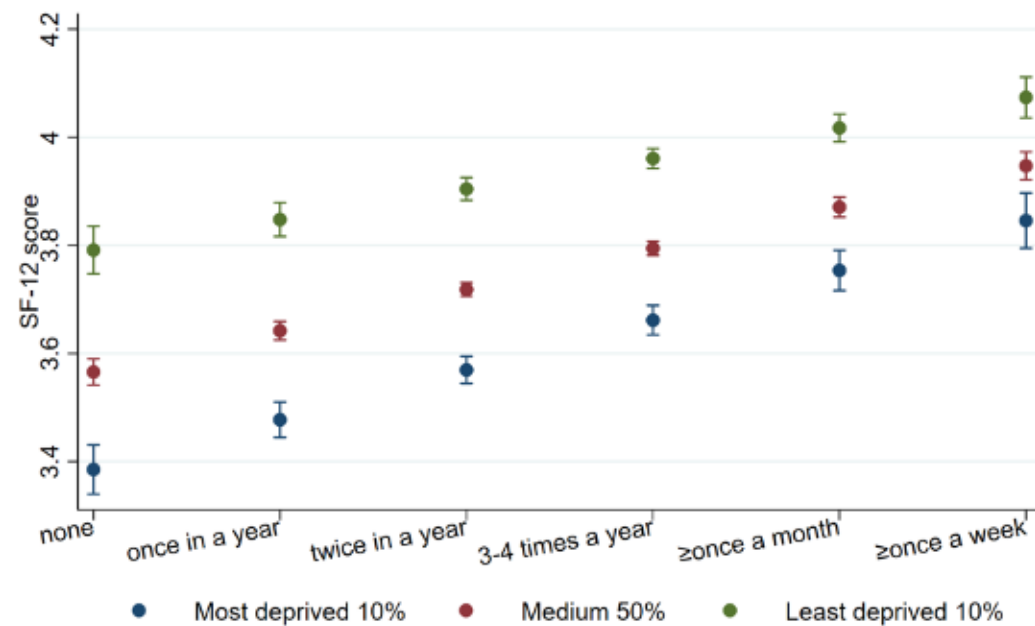
# Geographical barriers

### Area deprivation: 20% most deprived vs 20% least deprived



Ministry of Housing, Communities, and Local Government 2019

### Cultural attendance & mental health functioning by area deprivation level



Mak et al. BMJ Open 2021

Mak et al. *BMC Public Health*, 2021.

## Contact

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